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ORNITHOLOGICAL NOTES FROM MID-WALES.

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THE following notes, referring to the past two years, are in continuation of similar ones relating to this neighbourhood which have appeared in 'The Zoologist' from time to time (Zool. 1900, pp. 76-79).

On January 10th, 1900, Mr. F. T. Feilden, of Borth, described to me a specimen of the "hairy" variety of the Waterhen which he had obtained some time previously. He reported a pair of Red-necked Grebes upon the Dovey during the previous October. One of them was shot, but not retrieved. On November 9th the survivor was seen in company with Dabchicks and a Merganser. Further up the Bay, off the Merionethshire coast, Mr. G. H. Caton-Haigh finds the Eared Grebe by no means uncommon when on the spring passage, but he has never met with the Red-necked Grebe. Col. Feilden obtained a Bittern, an old male bird, upon January 8th. In February "a large brown Harrier," either a Marsh-Harrier or Ring-tail, was seen quartering over the Bog upon several occasions.

On March 3rd Oystercatchers and Curlew were extremely noisy after dark.

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Capt. Cosens, of Llanbadarn, obligingly informed me of a specimen of the Norfolk Plover, which he remembered to have seen about 1882-83 when in the hands of Mr. Hutchings for preservation. It was obtained in the neighbourhood of Aberaeron, and makes an addition to the list of Cardiganshire birds, of which I have previously recorded 212 species. Mr. E. E. M. Edwards obligingly informed me of an instance of the Woodcock breeding in the neighbourhood of Dolgelly, viz., in Dolg-y-Feiliau Wood, near Tyn-y-Groes. For some unknown reason, the nesting of the Woodcock in this part of the country is an event of extremely rare occurrence. Mr. Arthur Parry wrote me that a pair of Buzzards breed annually on Trychrug, near Cilcennin, in this county. On March 18th, in frost and snow, Mr. D. B. Grubb visited a Ravens' nest, which contained three eggs, in the wild hill-district of Cardiganshire. The cock Raven tilted at a Peregrine Falcon which came up the valley until both were lost to sight in the snow. Mr. Grubb had an excellent view of a Kite, and saw six Buzzards upon the wing at once. One of them was carrying a large stick to its unfinished nest.

On April 5th I visited a nesting locality of the Raven in the Nant Berwyn, near Tregaron. The cock Raven appeared upon the wing, barked a little, and seemed unwilling to leave the vicinity, but I could see nothing of the hen bird, and last year's nest had not been repaired. A young Mistle-Thrush of an early brood had already flown from the nest by April 10th. I saw two or three Choughs in the neighbourhood of the Monk's Cave, and was pleased to hear from Mr. Feilden that he has met with these birds more frequently of late. The same observer reported five Gannets off Borth. The rippling note of the Whimbrel announced its arrival upon April 23rd.

On May 9th I saw a Ray's Wagtail in fine plumage by the Rheidol. This species is very local with us, and does not breed within six or eight miles of Aberystwyth. On May 11th a pair of Ravens passed over my house, shortly followed by a third, the latter annoyed by Jackdaws. Ring Plover and Oystercatchers were breeding as usual upon the shingle beaches at the mouth of the Dovey. Mr. D. B. Grubb kindly gave me an account of the birds seen by him while trout-fishing for three



weeks from May 19th in a remote part of the county. Only one Kite was observed, and the immemorial breeding haunt at Ystrad Ffin appeared to be deserted. At least eleven pairs of Buzzards were found to be nesting within a radius of some six miles from his headquarters, and instances in which the first-hatched and strongest nestling bullied the younger ones to death were again noted. In fact, this may be said to be a usual habit of Welsh Buzzards. Kestrels were tenanted a nest from which young Ravens had flown. Another Kestrel, having taken possession of a deserted Buzzard's nest, was sitting upon two Buzzard's eggs in addition to her own. A pair of Ravens in the Yrfon Valley had two young upon the wing. Pied Flycatchers were breeding freely, often in disused holes of the Green or Greater Spotted Woodpecker.

On August 30th, when ascending Cader Idris, I heard a Raven above Llyn-y-Cau. The Chiffchaff sang upon Sept. 16th and again upon Oct. 2nd, rather a late date. Redwings put in an appearance on Oct. 20th, and four days later a Thrush was coming into song again. An unusually large party of Long-tailed Tits numbered twenty-five. On Nov. 22nd a Chough passed over my house at a good height. A Mistle-Thrush was singing at the close of the year.

The year 1901 opened with mild, bright weather. On Jan. 1st Wood-Pigeons were cooing. On the 3rd a Raven passed high overhead croaking angrily. A month later, snow inland brought a few Golden Plover to the neighbourhood of the coast. On March 9th I watched numerous Curlew, a party of thirty Shieldrakes, and three Wigeon upon the sand-banks of the Dovey. Visiting the Bird Rock near Towyn upon Easter Monday, I found that as yet only half-a-dozen Cormorants were to be seen upon the breeding ledges. Five or six pairs of Herons were nesting in tall larches at Peniarth, further down the valley. A Wood-Lark was singing in the Nant Berwyn on April 17th. On the 26th I heard the note of the Turtle-Dove at Wallog, a decidedly early date for the arrival of this migrant, which is a scarce and local visitant to Western Wales. A Tree-Creeper nested for the fourth year in succession in precisely the same spot, between an ivy-stem and the tree-trunk.

Visiting the Teifi Bog, near Tregaron, on May 25th, I found

the Lesser Black-backed Gulls breeding in about their usual numbers at this inland haunt, twelve miles from the sea. Dunlin were also nesting upon the bog, and a pair of Redshanks passed overhead. On Whit Monday I visited a Buzzard's nest in the neighbourhood of Strata Florida. It was situated in a thin Scotch fir at a height of about thirty feet from the ground, and contained two young birds, differing in age, and an unhatched egg, together with a mole brought by the old birds as provision for the former. On June 15th I found a small colony of Lesser Terns breeding at the mouth of the Dovey, where, as Mr. Feilden informs me, they established themselves in 1896 or 1897.

The Redbreast began to sing again on July 27th. On Aug. 1st Chaffinches were singing their broken summer song, and two days later a Willow-Wren was warbling softly to itself. A late Yellowhammer's nest contained young nearly fledged upon Aug. 16th. On the 17th a Swift went to its nest-hole under the eaves for the last time.

A large number of Ray's Wagtails in fields beside the Rheidol on Aug. 20th were evidently on migration. A Chiffchaff was singing quietly its late summer song, which I heard again on Sept. 3rd. The Spotted Flycatcher was last noted on the 14th. On Sept. 15th a Stonechat "chacked" and sang a strain or two. At the end of the month the Whimbrel's note announced its presence upon the return migration.

A Thrush was coming into song again on October 23rd. The last member of a late brood of young Swallows lingered till Nov. 1st. On Nov. 2nd the Cirl Bunting sang; here the most constant of songsters, its monotonous trill is heard throughout the year.

Mr. D. B. Grubb, who again visited the district referred to above, informed me that eggs had been taken from two Kites' nests, those of the only two pairs which continue to frequent that neighbourhood. An unsuccessful attempt was made to protect one nest by coiling barbed wire round the trunk of the tree. This fine species is nearing extinction in Wales, its nests being ruthlessly harried by egg-dealers whose names are perfectly well known. There is no possibility of these Kites breeding successfully except under such protection as would be afforded

by a resolute and reliable watcher, never out of sight of the nest night or day. A clean sweep had also been made of the Buzzards' eggs, and it is probable that a dozen pairs did not succeed collectively in bringing off more than three or four young.

Egg-collecting, and not the persecution of the gamekeeper, will be eventually responsible for the extinction of both the Kite and Buzzard in Central Wales.

Mr. Grubb tells me that he found the Pied Flycatcher extremely scarce, in marked contrast to its abundance the previous year.

The following notes contain a summary of the information obtained in response to a printed circular asking for details as to the occurrence or otherwise of certain species whose distribution in Wales appears to be imperfectly known.

With regard to the Lesser Whitethroat, Capt. Swainson amplifies the account which he has given of this species in Breconshire in 'The Zoologist' for 1891, p. 356. He writes of it as being not uncommon at Brecon, and sparingly distributed over all the lowlands of the county. It occurs westward up to the point where the Mynydd Epynt hills begin to rise. "The most westerly point at which I have ever heard it is Llanwrtyd." As far as my own experience goes, the Lesser Whitethroat is entirely wanting in Cardiganshire. In Montgomeryshire I heard it at Welshpool on May 26th, 1900. Mr. G. H. Caton-Haigh has only one doubtful record of it in Merionethshire. Mr. O. V. Aplin failed to identify it in the Lleyn peninsula of Carnarvonshire, but states that Mr. Coward observed a pair breeding at Abersoch in May, 1893 (Zool. Nov. 1900, p. 492).

It may be said then that the Lesser Whitethroat ranges, upon the eastern side, up to the foot of the chain of elevated moors and sheep-walks which forms the backbone of the Principality, but seldom or never crosses these treeless uplands, and is consequently absent from Western Wales. To this statement Mr. Coward's observation appears to furnish the sole exception.

None of my correspondents have any knowledge of the Tree Sparrow in Wales. Capt. Swainson says, "I have never been able to find it, although I have always been on the look-out."

Another species to whose distribution a special interest attaches is the Twite. As regards Breconshire, Capt. Swainson

writes: "I have been a great deal on the hills at all seasons without seeing or hearing the Twite. Moreover, I have often looked for it upon the mountains of North Wales, but without success." Personally I have failed to meet with the Twite in Cardiganshire, even in localities which appeared extremely well suited to it. Mr. G. H. Caton-Haigh has not come across it in Merionethshire. As regards Carnarvonshire, Mr. O. V. Aplin, when on the mountain called Yr Eifi, or The Rivals, north of Pwllheli, noticed one or two birds which he judged to be Twites from their note. He states that Mr. Coward saw flocks on The Rivals and Carn Madryn (Zool. 1900, p. 493). I have no information from the Berwyn mountains, where the heather-grown grouse-moors furnish much likely ground. The evidence thus favours the view that the Twite ranges into North Wales, but does not reach the central or southern hill-districts of the Principality.

The Hawfinch Capt. Swainson characterizes as a rare resident in Breconshire. He writes: "I know of two instances of its nesting here (at Brecon). About three years ago small flocks attacked the peas in July, and on two occasions several were shot."

The Wryneck is described as "very rare" in Breconshire. Capt. Swainson says, "I am acquainted with its cry, which I have heard here only once, eleven years ago." Mr. F. T. Feilden has heard the note of the Wryneck at Three Cocks Junction.

With reference to the Kite in Breconshire, Capt. Swainson writes as follows:—

"Still a resident, but very rare. It is difficult to estimate the number of pairs, as they change their nesting places from year to year, but I should be inclined to think that there are about two pairs left. I myself have not seen bird or nest for seven years. Formerly the Kite used to breed yearly near Aberbran, about five miles west from Brecon (Zool. 1889, p. 226). In 1894 a pair of Buzzards took possession of the wood and nested, and the Kites were not to be found, but in 1895 they returned. There is in a Brecon collection a clutch of three eggs taken from this wood. There are five or six places in the county where the Kite occasionally nests or tries to. I have heard on pretty good authority that a pair brought off a brood

safely in 1899 at Upper Chapel (the place alluded to in Mr. Phillips's List of the Birds of Breconshire, Zool. 1882). I have been unable to get any information for the present year (1900).

"I am afraid that, like yourself, I must come to the conclusion that the species is doomed. What is the use of a fine of £1 when the eggs and bird are worth two or three times as much? A gamekeeper once said to me, 'A dead Kite is worth £2 or £3: how can you expect a poor man to spare one?'"

THE BIRDS OF BARDSEY ISLAND, WITH ADDITIONAL NOTES ON THE BIRDS OF LLEYN.

By O. V. APLIN, F.L.S.

THERE are few inhabited places in Southern Britain more inaccessible than Bardsey. This arises rather from the difficulties which frequently attend the passage to or from the island than from its remoteness. For its northern extremity is less than two miles from Trwyn-y-Gwyddel, the nearest point of the mainland of Llyn, while the passage from Aberdaron, where you take boat, to the landing-place, Cefn Enlli, extends over only about five miles. But Bardsey derives its ancient Welsh name, Enlli, from the fierce current which rages between it and the mainland, and it is only at certain states of the tide that a crossing can be made. Moreover, if it blows hard, as it so often does on this windy coast, winter and summer, it is altogether impossible to cross the sound in an open boat, in one direction or the other, and most likely in both; so that it is commonly said that no one should go to Bardsey who is not prepared to stay a week. I started about noon on the 23rd May, 1901, to cross to the island, in calm weather. But as in my hurry to set foot on the famous isle (having been baulked of my desire the year before) I had persuaded the boatmen to start too early, we were caught under Bardsey cliffs by the last of the tide, and our boat was tossed about somewhat like a cork in a pot of boiling water—and this in a dead and stifling calm. I intended to get away again on the morning tide the following day. But at night it came on to blow; at daybreak, I was told, no boat could cross, and, true to its character, Bardsey kept me a prisoner until the next tide. This did not matter, and I had so much more time with the birds. We got off finally about half-past one, with the wind nearly ahead, light to moderate, and coming rather squally off the land. We had borrowed an extra sail and taken in a small cartload of big stones for additional ballast. We rowed

under the cliffs to the north end of the island, then sailed rapidly across the sound and in under the cliffs of Pen-y-Cil, whence we slowly made our way along under the land to Aberdaron. The passage took two hours, a fact worth the attention of anyone visiting Bardsey and hoping to catch the daily mail-cart which connects Aberdaron with the outer world.

Bardsey is naturally divided into two parts. Nearly two-thirds of the larger, northern portion—over a mile long and nearly three-quarters of a mile wide—consists of cultivated ground and poor pasture land; and the other third or more is occupied by the mountain (548 feet). The steep, grassy slopes of this (then very slippery from the long-continued dry weather, and a little dangerous on the seaward side) are dotted on the west side with hard clumps of sheep-bitten gorse, and varied by stretches of fern towards the sea. Rocks and crags rise out of the turf at the top and on the north and east sides especially, and sometimes form small cliffs. To lose one's footing on the seaward side would in many places mean falling on to the rocks below or going over the cliffs into the sea. The southern portion of the island, where the lighthouse stands, does not rise more than about fifty feet above the sea. It is connected with the other part by a very narrow neck, and although three-quarters of a mile long is only about a quarter of a mile wide anywhere. It affords only some pasture, poor everywhere, and consisting in places of little more than heather, an inch high, scilla, armeria, and lotus. The only trees on Bardsey are two or three sycamores and a few ashes (really not worth calling trees) which grow at the foot of the mountain, just where the farms lie and shelter them a little with their buildings. Here, too, are some wind-seared elder-bushes. In the little gardens gooseberries and currants grow well to the height of the wall, and there are a few "tea-shrubs," fuchsias, and tamarisks, etc. The banks of earth and stone which form the fences on the low ground are capped with bramble, gorse, fern, and occasionally with a foot of scrubby hawthorn, and one or two larger bushes of the latter may be seen. In one sheltered part of the mountain, at Pen Cristin, there is some taller gorse, not bitten down by sheep into a hard cushion. Two wettish places, fenced in, about ten yards square, where the waste of springs has been utilized to

grow a kind of willow for bands, present a greater growth of elder, bramble, and tall weeds. And there, and along a bank near one of them, I found many of the small birds I noticed. The banks are gay with thrift, vernal squill, the sweetly-scented burnet-rose, gorse, sea-campion, and a few foxgloves; and I saw some dwarf bluebells and the lady's-fingers (*Anthyllis*). Excellent samphire (*Crithmum maritimum*) grows in abundance on the low rocks, and has been gathered for a hundred years at least.

On the east side the coast of Bardsey presents a front of dark coloured rock to the restless sea. Here on the sloping rock-faces, and the ledges, the Herring-Gulls, which breed there in considerable numbers, are conspicuous. The steep shelving rocks are varied with more precipitous faces, overhung ledges, hollows, and chasms. Along the coast of the lower lying parts of the island there is a broad breastwork of broken jagged rock, high enough sometimes to form low cliffs, and indented with yawning chasms, whose sides are high and steep enough in some cases to accommodate the Chough. Where these rocks merge into the short weedy turf the Oystercatchers breed, the pairs flying on to the outer rocks as one approaches, where they sit and cry "feet," or "fic" or "pic," an unlimited number of times, and sometimes "my feet." Rock-Pipits flit about too; I hesitate to say breed, for I think of the hours I have spent in an always unsuccessful search for this bird's nest. Where the one little inlet affords a harbour and safe lying for the boats, a stretch of sand and seaweedy rocks is uncovered at low tide. Bardsey is included in Willughby's 'Ornithology' (1678), among the list "Of some remarkable Isles, Cliffs, and Rocks about England, where Sea-fowl do yearly build and breed in great numbers," but no particulars relating to it are given. I do not, however, think that Bardsey could have been a great sea-fowl station within the period of modern history. The then Vicar of Aberdaron (in whose parish Bardsey lies), in the account of the island with which he furnished Bingley in 1798, asserts, it is true, that "among these precipices the intrepid inhabitants, in the spring of the year, employ themselves in collecting the eggs of the various species of sea-fowl that frequent them"; and he describes the manner of climbing pursued in collecting the eggs and the samphire. The Bardsey men gather eggs now, but these are all,

or nearly all, Herring-Gulls' eggs. Pennant, who visited the island on one of his Tours (about the year 1774-75), said it was "well cultivated and productive of everything which the mainland affords"; but he does not mention the birds at all, though his visit was evidently made in the summer; and he would surely have done so had there been any remarkable gathering of them. He mentions the Puffins at St. Tudwal's. There are no Puffins on Bardsey now, and, although it is distinctly stated in Book III. of the 'Ornithology' that the Puffins bred yearly in Bardsey in great numbers, I think this is a little doubtful. The author, or his editor, may have seen the Puffins belonging to Ynys Gwylan, which are scattered over the sea near Bardsey in the summer, and concluded that they bred on the latter island. The low part of the island is, indeed, suitable for Puffins, but the greater part of it has long been under cultivation. In 1798 Bardsey had seventy inhabitants, engaged in fishing and agriculture. In more remote days it was apparently even more thickly populated, and it was visited by a great many pilgrims. It was called by the Welsh poets the Sanctuary of Saints, and the Isle of Refuge. The reputed sanctity of the island induced the religious to resort to it from many very distant parts of the kingdom. The monastery (of which the ruins remain) is said to have been founded in the eighth century, but there is evidence that there was a religious house in the island at a much more early date. The odour of sanctity clung to the place down to Pennant's time. When the foundations of one of the new farms was laid, old gold coins, "each worth two guineas," were found; and it is said that one could not dig deeply in one part without finding them. This means pilgrims, and a well-found monastery; for, though many would come empty, the full paid for all. The coming and going of so many people must have made Bardsey anything but a "lonely resort of sea-fowl," and the demands upon the eggs of those that bred there must have been large. This state of things can hardly have co-existed with a large Puffin-warren on the lower part of Bardsey, where the farms lie. The mountain could never have accommodated them, I should think. The soil is shallow, and there are not sufficient holes and crevices under and in the rocks to house a large Puffin population. Willughby, and his editor Ray, gathered a good deal from hearsay. They relate that

"a certain Fisherman told us, that in the middle of Winter he once found a *Puffin* under water, torpid, among the Rocks not far from Bardsey Island, which being again cast into the Sea streightway sank to the bottom. Believe it that will." But Bardsey has always been a strange place, and is so still, as will presently appear from what a man told me about the Frogs. Twenty thousand saints, too, are buried here, albeit one writer sagely remarks: "It would be much more facile to find graves in Bardsey for so many saints, than saints for so many graves." There are no Kittiwakes on Bardsey, and only a few Guillemots and Razorbills.

A head-wind on our return journey necessitated our hugging the cliffs from Pen Cristin nearly to the northern extremity of the island, and I could see no high cliff sheer from the sea with ledges extensive enough to form a breeding station of the *Alcidæ* of any importance. There are ledges which would do for Cormorants, and hollows for Shags, but I saw no large cave. Starlings, too, breed in the rocks, and, higher up, Jackdaws and a pair of Peregrine Falcons. A large number of Herring-Gulls inhabit the shelving—and, to some extent, sloping—cliffs immediately above the sea; but, with the exception of the Shearwaters and a few other species, these are the only sea-fowl for which Bardsey is now remarkable.

There are, I was told, no "great snakes" on Bardsey; only "little small ones" (? Blindworms). The Vicar of Aberdaron, in 1798, stated that "none of the inhabitants ever saw in it Frog, Toad or snake of any kind." I inquired if there were any Frogs now. "No," said my informant; "and if any Frogs are brought to the island they die—ay, and if you take of the earth of Bardsey, and put it into where there are Frogs on the mainland, the Frogs all die." "That," said I, "is what you have been told." "That is what I have seen," he replied. "You have tried it yourself?" I asked. "Yes, I have done it myself," said he. "And the Frogs died?" "Die they did," said he.* After that I said no more; and I merely add now, with the author of the 'Ornithology,' "believe it that will." There are Rabbits about the low grounds, and some on the mountain, the latter having their habitations chiefly among the stony rocks. Those that I saw

* Cf. Giraldus, of the Irish soil.

appeared to be rather warmly coloured, but this may have been caused by the contrast with the sad colour of their surroundings, caused by the severe drought then prevailing, which told terribly on the shallow soil of this outlying spot.

The most noticeable land-birds were the Corn-Bunting, Blackbird, Starling, Corn-Crake, and Jackdaw. There are some common birds found in Lleyrn which I could not find on Bardsey; and, as the birds there are rather tame and conspicuous, it is not likely that I should overlook them if they were to be found on the island at all commonly. The Robin and Stonechat, both common on the adjoining part of the mainland, are among them. Both may have been temporarily exterminated by the long continuance of heavy storms from the sea which battered Lleyrn in the previous winter. I think if there had been any Sky-Larks on the island they would surely have been singing over the fields at five o'clock on a fine May morning. I saw no Swifts or Yellow Buntings; I may have overlooked the Wren. I saw thirty-nine (or forty) species of birds in all, and the list, although doubtless incomplete, may be worth printing, as it gives, at all events, a fair idea of the bird-life of this outlying bit of North Wales.

1. BLACKBIRD (*Turdus merula*).—Very common, conspicuous, and tame. For want of a better place, the males sang from the top of the stone gate-posts, and from big stones.
2. WHEATEAR (*Saxicola ananthe*).—Fairly common.
3. WHITETHROAT (*Sylvia cinerea*).—Fairly numerous about the taller gorse.
4. WILLOW-WREN (*Phylloscopus trochilus*).—A few about the low-lying parts.
5. SEDGE-WARBLER (*Acrocephalus phragmitis*).—One or two about the willow-beds.
6. HEDGE-SPARROW (*Accentor modularis*).—Pretty common in the lower parts; carrying food.
7. MEADOW-PIPIT (*Anthus pratensis*).—Some about the mountain and lower pastures.
8. ROCK-PIPIT (*A. obscurus*).—Fairly common.
9. SPOTTED FLYCATCHER (*Muscicapa grisola*).—Several about the farm-gardens.
10. SWALLOW (*Hirundo rustica*).—A good many.

11. HOUSE-MARTIN (*Chelidon urbica*).—Several seen; one flying about the top of the mountain.

12. SAND-MARTIN (*Cotile riparia*).—A few seen.

[PIED WAGTAIL.—I believe I remember seeing one about one of the farms, but as it is not put down in the pocket-list I made up as I saw each species, I have not numbered it here.]

13. GOLDFINCH (*Carduelis elegans*).—At least one pair, and, I believe, more.

14. LINNET (*Linota cannabina*).—Several seen.

15. HOUSE-SPARROW (*Passer domesticus*).—A fair number about the farms. The males were very bright and clean-looking. In the account of Bardsey furnished to Bingley in 1789 by Mr. Jones, Vicar of Aberdaron, it is stated that, "till about four years ago, no sparrows had been known to breed here; three nests were, however, built during the same spring, and the produce have since completely colonized the place."

16. CHAFFINCH (*Fringilla cælebs*).—Fairly common; in fine song.

17. CORN-BUNTING (*Emberiza miliaria*).—Common; its skirling, jingling song was to be heard all about the cultivated parts of the island.

18. STARLING (*Sturnus vulgaris*).—Abundant. Some breed about the cliffs, but many breed in shallow holes in the turf and stone banks which divide the fields. The holes are about two feet (and sometimes less) from the ground, and so shallow that the noisy gaping young were only two or three inches from the surface. Some of the banks were quite musical with the cries of the young birds. Some pairs were breeding in shallow hollows inside an old lime-kiln, and one brood of young could be seen by an observer standing at a distance of a yard or two from the hole.

19. CHOUGH (*Pyrrhocorax graculus*).—In the evening three birds looked very pretty soaring, and wheeling about in curves and circles over the hill-side, evidently at play. They were rather tame, and came so close that their red feet could be seen tucked closely up to their bodies. As they wheeled in the air they spread their tails occasionally. Later on I saw a rather noisy and angry pair at a spot where they were probably breeding. The local name is "Bran pig coch."

20. JACKDAW (*Corvus monedula*).—Common.

21. CARRION-CROW (*C. corone*).—One pair seen.

22. CUCKOO (*Cuculus canorus*).—Several; one beating about near the willows.

23. PEREGRINE FALCON (*Falco peregrinus*).—"Gwalch glas." There was evidently a pair breeding somewhere on the most cliff-like crag on

the mountain ; but we did not move the female, which must have been sitting on a late clutch of eggs. During the time we were in the vicinity of the crag, the male—a beautiful old blue bird—continued to circle round, occasionally coming overhead, and comparatively close to us. He cried incessantly his harsh grating “quayk quayk quayk quayk.” The next morning, when I went up by myself, he behaved in the same way.

24. KESTREL (*F. tinnunculus*).—Only one seen.

25. CORMORANT (*Phalacrocorax carbo*).—Seen near Bardsey.

26. SHAG (*P. graculus*).—A few along the east side, where I think they breed.

27. STOCK-DOVE (*Columba ænas*).—One on the mountain side.

28. TURTLE-DOVE (*Turtur communis*).—To my great surprise, I saw one feeding in one of the little fields. I had never previously met with it in Lleyn, nor, indeed, in any part of the counties of Carnarvon and Merioneth. This individual was probably a wanderer ; and the species may be extending its range in North Wales. A friend of mine saw one this year near Dolgelly in May ; the only previous occurrence in that neighbourhood known to me was in a past September, when two were seen (and, I think, shot) close to Barmouth.

29. CORN-CRAKE (*Crex pratensis*).—Common. I could hear three calling at one time.

30. PEEWIT (*Vanellus vulgaris*). — A few ; chiefly about the light-house end.

31. OYSTERCATCHER (*Œmatopus ostralegus*).—“Saer”=the artificer. Fairly common, especially round the rocks of the south point, and along the west side. I think they were breeding where the turf merged into the rocks. But I only looked for one nest ; this was among some jagged whitish rocks at the edge of the turf. It was lined with angular stones half an inch to an inch in length, and contained two eggs, the finest Oystercatcher’s eggs I ever saw. The one I took was partly incubated. It is a long, rather pointed egg, well marked with large dark markings chiefly round the big end, where the blotches and streaks form a broken zone. The birds mobbed me savagely, flying within ten yards or less of my head, with loud shrieks of “pic.” When they settled at a little distance this cry was uttered so rapidly that it developed into a trill.

32. DUNLIN (*Tringa alpina*).—One or two immature birds about the landing-place.

33. COMMON SANDPIPER (*Totanus hypoleucus*). — One there. It is quite possible that this species may breed on the island.

34. CURLEW (*Numenius arquata*).—One or two seen.

35. HERRING-GULL (*Larus argentatus*).—Breeding in considerable numbers at the foot of the mountain, on the shelving rocks over the sea. I think a few pairs breed in the breastwork of rock about the south point and the south-west side.

36. GREAT BLACK-BACKED GULL (*L. marinus*).—One pair had a nest and three eggs near the Herring-Gulls.

37. RAZORBILL (*Alca torda*).—I only saw two or three at the foot of the cliffs. They are said to breed in one inaccessible spot.

38. GUILLEMOT (*Uria troile*).—About a score or more with the Razorbills. Probably the breeding-place is somewhere about the north-east corner. I do not think there can be many birds of either species there; for, although Razorbills began laying in another breeding-place in Lleyn at this date, no Guillemot's egg was seen until a day or two later, although the birds were sitting about the ledges. The proportion of Bardsey birds presumably on the cliff, and not seen by me, to those on the water would probably not have been large.

39. MANX SHEARWATER (*Puffinus anglorum*).—There is a considerable colony at the north-east end of the island, on the side of the mountain. When I left the breeding-place, about 9.30 p.m., all was quiet; but about midnight I could hear numbers crying incessantly "cock-cock-go-grow," or "cock-go-grow," over the fields in front of the house I was sleeping in. And one of my boatmen, who was coming along the road about that time, said that, although it was too dark to see them, they appeared to be flying about over the fields, low down. They breed chiefly on a steep grassy cliff varied by patches of fern, and large rocks which project from the turf. Some of the Shearwaters breed in holes under these rocks where they emerge from the turf; others in long clefts in, and winding passages among, the rocks. Most of the birds and eggs are quite inaccessible, but certain marks at the entrance denoted an occupied hole. Some of the birds were indignantly noisy when a stick was gently pushed into the easier holes. We extracted two birds and an egg from burrows. The birds are very savage, and bite everything within reach, and they inflict a painful bite. Another egg we could see in a cleft in the rocks, but could not reach. In one place there was a little cave under some rocks, and in it on the bare earth floor we could see an egg. The entrance of the cave was large enough, when a sod had been pulled away, for a young boatman to wriggle in on his stomach and fetch the egg; inside the cave was large enough for him to turn in. The bird must have retired to some inner fastness. Both the other eggs lay on the bare soil. As far as I have seen the ground immediately in front of holes selected by Shearwaters to breed in always falls very sharply; indeed, in some

cases there is a nearly perpendicular rock face or turf slope; this enables the birds to get on the wing readily. I tried to find out if the Shearwater *stands* on its foot (toes and webs) alone, or on its foot and tarsus, but without coming to a perfectly satisfactory conclusion. But my impression is that when a Shearwater is standing still, on land, it rests on the foot *and* tarsus; but when it runs forward a few steps to get on the wing, it rises on to its feet. Birds which I held by the tips of the extended wings moved in this way, but declined to remain still. And two that were sent to me once in an open box (from which they could not rise) were always squatted down, until I liberated them.

The avifauna of Bardsey is not unlike that of Lambay Island, off the opposite coast of Ireland, but further north (*vide* Zool. 1882, p. 155). Of the forty-four species in Mr. Hart's list, I have seen twenty-seven in Bardsey, and all the others (except the Twite, Hooded Crow, Rock-Dove, Black Guillemot, and perhaps the Ring-Dove) very probably occur. In respect of the last named allowance must be made for the different character of the respective mainlands. The Carrion-Crow is naturally replaced on Lambay by the Hooded Crow, although the latter is stated to have been very rarely seen in that part of Ireland at that date. The Black Guillemot formerly bred on Lambay; indeed, a few pairs are said to breed still, as well as on Ireland's Eye, and perhaps at Howth and Wicklow Head, still nearer Bardsey ('Birds of Ireland'). Yet we have no record of it breeding on Bardsey, or in any part of Lleyn.

Of the forty species seen on Bardsey, twenty-seven occur in the Lambay list; and of the other thirteen, one (the Chough) formerly bred there, and the rest (save the Carrion-Crow, Turtle-Dove, and Stock-Dove) are all common Irish birds. The Turtle-Dove is as rare in Lleyn as in Ireland. Part of the (limited) breeding range of the Stock-Dove in Ireland (Wicklow) lies just opposite Bardsey.

(To be continued.)

OBITUARY.

HUGH ALEXANDER MACPHERSON, M.A.

RARELY, indeed, have the interests served by this Journal sustained a greater loss than in the premature removal from our midst of the Rev. Hugh Alexander Macpherson. A sudden attack of inflammation, resulting from exposure to inclement weather, on a constitution never quite robust, came on the 23rd, and on the 26th November a bright existence passed away.

A member of an ancient branch of the Clan, that has given many members to high public service, he first saw the light in Calcutta, forty-three years ago, the eldest son of Mr. William Macpherson, of Trinity College, Cambridge, editor of the 'Quarterly Review.' His grandfather was Dr. Macpherson, Professor of Greek in King's College, Aberdeen. Educated at Haileybury and Oriel College, Oxford, he received the degree of B. A. in 1881, and M. A. (with honours) in 1884. He was ordained to the ministry in 1882, and served as curate of St. James's, Carlisle, till 1885, when he went to London, and held curacies in Upper Holloway and Paddington. He came back to Carlisle three years later, and remained there in various ecclesiastical offices till 1897, when he accepted the incumbency of Allonby, close by the ever-troubled waters of the Solway Firth. About a couple of years ago he removed to another charge at Pitlochry, in the Central Highlands, where a busy life has closed all too soon. Although a Highlandman, his heart was where his life's work had been done, and by his own wishes his body was laid to rest in the cemetery of the old Border City he loved so well by a great company of mourners, and amidst numerous manifestations of public grief.

As a naturalist, Macpherson possessed a rare—almost a unique—combination of qualifications; he was equally eminent in both field and cabinet work, while as a scholar he wielded a pen of high literary excellence. Indefatigable in his outdoor

observations, one day he would be found wandering amidst the splendid scenery of Lakeland, interrogating the dalesmen on points in the history and traditions of the wild things around; the next lying hidden along shore, glasses and book and pencil before him, watching and noting the actions of the waders and wildfowl as they were moved along the great sand-banks by the swift flowing tide of Solway; or, maybe, on one of the native whammle boats going down the firth on the ebb, ever amassing the knowledge which, in many hundreds of articles and paragraphs, he contributed so profusely to these and other pages.

The same industry with which he carried on his general work characterized his correspondence. Letters of three or four sheets and post-cards followed each other in such rapid succession, that any conscientious correspondent not gifted with the like enthusiasm had difficulty in making due acknowledgment. Telegrams, too, came at times when anything he thought important cropped up. We remember with pleasure how, seated at breakfast one May morning in 1888, a "wire" was laid before us, which read as follows:—"Pallas's Sand Grouse have arrived in numbers. Look out for them. Tell everybody. Macpherson." The state of suppressed excitement under which our friend laboured in making such an announcement can well be imagined by those who knew him.

His keenness of disposition and Celtic fervour of temperament occasionally led him into impatience with fellow-workers, and it has to be said that, now and again, some little disagreements resulted where more phlegmatic individuals would never have noticed any incompatibility. But no permanent estrangements ever resulted. Macpherson was always first to heal any breaches thus made.

His first work of importance was the volume on the 'Birds of Cumberland' (1886), prepared in collaboration with Mr. Wm. Duckworth. Next followed the 'Visitation of Pallas's Sand Grouse to Scotland in 1888' (1889). Three volumes of the 'Young Collector Series'—"Fishes," "Mammals," and a "Hand-book of British Birds"—were undertaken and issued in 1891. The last named, although certainly of rather limited dimensions, is really a capital little manual, and ought to be more widely known than it is. In 1892 came his *magnum opus*, 'The Verte-

brate Fauna of Lakeland.' Suggested by, and following the main lines of, Harvie-Brown and Buckley's series of faunas of the Scottish areas, yet in manner of treatment, and in other features, with a character of thorough originality, it forms perhaps the finest faunal history that has ever been written on any district within the British Islands. The natural history portions of the two volumes of the 'Fur and Feather Series,' devoted respectively to the Partridge and the Grouse, were penned by our departed friend in 1893, and that on the Red Deer in 1896. The 'History of Fowling' (1897) was his latest and most voluminous book. In addition to these, Macpherson was responsible for a portion of the letterpress in the 'Royal Natural History,' he having supplied the account of the birds "from Corvidæ to Cærebidæ." And similarly, in that fine work, 'British Birds, their Nests and Eggs, by various well-known Authors,' he was responsible for the Tubinares, which he described in his usual luminous style. He wrote the chapter on Ornithology for the Cumberland volume of the Victorian County Histories, but, alas! it will appear as posthumous work. It is understood that an account of the avifauna of Skye, in which picturesque Hebridean island his ancestral estate of Glendale is situated, was nearly ready for the printer.

Such solid literary labours did not by any means exhaust his activity, for he contributed an immense amount of thoroughly good matter to magazines and newspapers. Since he has resided at Pitlochry he often furnished one of the excellent natural history articles that appear each Tuesday in the 'Scotsman.'

The Carlisle Museum in Tullie House has been more indebted to Macpherson than anyone else. The collection of birds was his especial care, and most admirably it has been completed, mostly with his own specimens, or those procured from friends.

In concluding this brief and inadequate memoir of one who stood far forward amongst British ornithologists, we may express the confident hope that a memorial volume, for which ample materials exist, may be forthcoming ere long.

R. S.

LIONEL DE NICEVILLE.

THE last Indian mail brought the sad news of the death, from malarial fever, of Mr. Lionel de Niceville, the eminent lepidopterist. For many years Mr. de Niceville worked unremittingly and enthusiastically at Eastern Lepidoptera, devoting special attention to the butterflies. His unrivalled knowledge, gained not only by a study of the literature of the subject, but by years of practical work and collecting in the field, he embodied in his well-known book, 'The Butterflies of India, Burma, and Ceylon,' which unfortunately he has not lived to finish. Numerous papers, however, in scientific journals testify to his industry and knowledge of Eastern butterflies. It is greatly to be regretted that only three volumes of 'The Butterflies' have been published. Vol. i. was written in collaboration with Col. G. F. L. Marshall; vols. ii. and iii. were written and published entirely by Mr. de Niceville. It was unfortunate that the volumes were only issued at long intervals, for, notwithstanding the popularity of butterflies with collectors, the work was published at a considerable pecuniary loss to the author.

Last year Mr. de Niceville accepted the post of Government Entomologist at the Indian Museum, and it was characteristic of him to enter on his work with the zeal and thoroughness he showed in all things. Indeed, his sad death is in a manner attributable to the keen sense of duty that led him, in spite of warnings from friends, as to the deadly unhealthiness of the Terai jungles in autumn, to proceed thither on purpose to investigate the ravages of insect-pests in the tea-gardens.

I do not attempt in this short notice any appreciation of Mr. de Niceville's scientific work; I write of him simply as a friend whose untimely loss I, in common with the scores of friends he had in India, deeply deplore.

I made Mr. de Niceville's acquaintance in 1888, and in the years that followed we were not only in constant correspondence, but he paid several visits to me in Burma. In 1891 he accompanied me for the first time into the forests in Tenasserim on a collecting trip, and a pleasanter fellow-traveller and more cheery companion it would be difficult to find. I shall never forget his almost boyish delight and enthusiasm on our first

day's march into the forests. It was a hot fine day in October following a week of rain, and the abundance of the varied insect-life of a tropical forest was marvellous to behold, and seemed to strike De Niceville, who had for months been confined to the drudgery of an office in Calcutta, with a delight quite inexpressible in words. How we rushed about that day, with net, bottle, and collecting-box in constant use, until far on in the afternoon, tired, dripping with perspiration, but still longing to continue collecting, we sat down on the bank of a little mountain stream to count our spoil. Even then De Niceville's thought was for others. Looking at the clouds of butterflies swarming on the sands at our feet, and flitting around us, he remarked:—"What wouldn't I give to have —— [mentioning a mutual friend of ours at home—the very Nestor among lepidopterists] out here; he would enjoy it so."

To so ardent a naturalist it was a labour of love to amass a vast collection, and to tend it with unremitting care. I am glad to learn that this valuable result of De Niceville's work has been acquired by the Indian Museum, where so much of his best work was done.

C. T. B.

NOTES AND QUERIES.

MAMMALIA.

Materials of Dormouse's Nest. — Examination of a large number of nests has proved that in this neighbourhood the nests are constructed of honeysuckle-bark—long coarse strips outside, fine threads inside. Occasionally dead leaves are added, but no grass. The nests are never far from where there are clumps of honeysuckle growing. As the dead bark would hardly be obtainable in quantity till the fall of the year, does not this fact lend colour to the suggestion made by Mr. T. Vaughan Roberts, that *Muscardinus avellanarius* usually litters in autumn, not in spring, as so generally supposed? That such a question should arise shows once more how little we know as to the "family affairs" of our familiar native mammals.—H. E. FORREST (Shrewsbury).

AVES.

Wood-Warbler (*Phylloscopus sibilatrix*) in the Isle of Man.—On May 29th last, when visiting Rhenass Glen, I listened for some time to the familiar song of this bird. The plantation, which is a comparatively new one (probably formed about sixty years ago), seems very suitable to the habits of this species, and I have no doubt that at least one pair was nesting there. I think this bird has not been noticed in the Isle of Man before.—FRANK S. GRAVES (Ballamoar, Alderley Edge).

Marsh-Warbler in Somerset. — I was pleased to see from Mr. Horsbrugh's note (Zool. 1901, p. 472) that the Marsh-Warbler (*Acrocephalus palustris*) is in evidence as a breeding species in the neighbourhood (presumably) of Martock. During the years 1888 to 1892 I came across several nests about seven or eight miles from Martock (*cf.* Zool. 1889, p. 450), and previous to that it was known to breed near Bath and Taunton. I have not visited in the nesting season the precise locality where I met with it since 1892, but doubtless it is still to be found there, and possibly in increasing numbers. At all events, it is satisfactory to learn from another observer that it is to be found breeding only a few miles off.—ROBERT H. READ (Bedford Park, London, W.).

Differences between immature Blue-headed and ordinary Yellow Wagtails.—Can any reader give some definite characteristics to distinguish immature birds of the Blue-headed Wagtail (*Motacilla flava*) from those of the ordinary Yellow Wagtail (*M. campestris*)? Mr. Howard Saunders, in his 'Manual,' apparently regards the white eye-stripe as the distinguishing feature of *M. flava*. Dr. Bowdler Sharpe describes this eye-stripe as "tawny buff," and winds up with the statement that "young birds of *M. flava* are scarcely distinguishable from those of *M. campestris*." During the last three autumnal migrations I have paid considerable attention to the point, and it would be interesting to see if the experience of others in any way coincides with my own. In September, 1899, I was looking out for *M. flava* amongst some flocks of *M. campestris* on the Norfolk coast. I scrutinized these flocks daily through strong glasses, and at last encountered a bird which struck me at once as being different to the ordinary run. Seen at a distance, it appeared darker above, especially about the head. I shot it and set it up, and may mention that a good judge, who saw it, momentarily took it for a Grey Wagtail. I showed it afterwards to Mr. J. H. Gurney and Mr. Southwell at Norwich, both of whom agreed that it was a specimen of *M. flava*. The eye-stripe was light tawny buff, and the throat white; the upper parts of the head and back dark greenish grey, not brownish. Against this darker ground the light margins of the wing-coverts and tertiaries showed up more than in *M. campestris*. In September, 1900, I was at Aldeburgh, and Yellow Wagtails were abundant on Thorpe Mere. I shot one or two to compare with my Norfolk bird, but once only saw anything to remind me of it; and this bird I failed to secure. Last year I was again in Norfolk, and came across a Wagtail which, as it ran, reminded me of the 1899 bird. I shot it, and have since compared the two. The later one agrees exactly in the hue of its upper parts and dark head; the eye-stripe is ill-defined but light, while the throat, though light, is certainly not so white as in the former bird, but has a yellowish tinge, especially at the sides. Still, comparing them with my Yellow Wagtail, I believe that they are both specimens of *M. flava*, and would suggest that the real difference between the two species at this age lies in the different hue of the upper parts, especially the head. The natural fading of a stuffed bird will doubtless soon reduce both eye-stripe and throat to white, and I cannot help thinking that these distinctive marks have in consequence been overrated, and that *M. flava* is a commoner bird in autumn than has been supposed; but that, as in the case of the Marsh-Warbler, an eye to variation in the shade of colour is the main requisite for its detection. In the Pied Wagtail

many of the parts that are white in the adult are suffused with yellow in the immature bird. May not the same be the case with the eye-stripe and throat of *M. flava*?—E. C. ARNOLD (The Close, Winchester).

Red-throated Pipit in Sussex.—I happened to be in the shop of Mr. G. Bristow, taxidermist, of St. Leonards, on the morning of Nov. 30th last, when a Pipit was brought in (in the flesh), which we believed to be *Anthus cervinus*. After the bird was mounted I sent it to Dr. Bowdler Sharpe at the British Museum, who kindly confirmed our identification. The bird was shot in a garden at Ninfield, Sussex, on Nov. 26th, 1901. It proved on dissection to be a female. It was exhibited at the meeting of the British Ornithologists' Club on Dec. 18th, 1901, by Mr. Howard Saunders.—L. A. CURTIS EDWARDS (31, Magdalen Road, St. Leonards-on-Sea).

Waxwings at Great Yarmouth.—During the latter part of November, 1901, Waxwings (*Ampelis garrulus*) were unusually numerous in the neighbourhood of Yarmouth. Mr. Lowne, taxidermist, had over a dozen for preservation. The majority seemed to be immature birds. A. PATTERSON (Ibis House, Great Yarmouth).

The Tree-Sparrow in Cardiganshire.—While nothing is definitely known of this species (*Passer montanus*) in Western Wales beyond the certainty of its being uncommon, there is a strong probability that it has often been overlooked. I met with it for the first time in this district on Dec. 20th last, when I clearly identified four individuals, which were feeding with Chaffinches, Greenfinches, and a Bramblefinch in a stackyard at Clarach, about a mile north of this town.—J. H. SALTER (Aberystwyth).

Nutcracker in Herefordshire.—A specimen of the Nutcracker (*Nucifraga caryocatactes*) was obtained in September not many miles from Hereford, and is now to be seen in the Cardiff Museum. There are reasons for not giving the exact place. So far as I can learn, the species has not been recorded from any of the neighbouring counties. H. E. FORREST (Shrewsbury).

Great Black Woodpecker.—At the beginning of December I noticed a letter in the natural history column of a local weekly paper, written by a gentleman from Kington, Herefordshire, and entitled "A Strange Bird." From reading the contents I conclude that the writer has had the good fortune to see a specimen of *Picus martius*, whose claim to a place in the list of British Birds is much disputed. The following is a copy of the letter:—"On Sunday morning, Nov. 24th, my wife and a lady visitor called my attention to the peculiar movements of a bird on

the trunk of a large sycamore in our grounds at the front of the house. In size and colour it looked like a Crow, but its beak was longer, and I could not reconcile the Woodpecker habits to such a large and well-known bird. We watched it for some time going round and round the trunk, picking, no doubt, its food from the crevices in the bark. At last it flew down upon the grass, and was lost to view among the shrubs. Being Sunday, I would not use my gun; otherwise I certainly would have endeavoured to secure a bird which I had never seen before. We have kept a sharp look-out since, but our new visitor has not appeared again. We have a large variety of birds in this county well known to us, but, as this is a decided stranger, I would be glad if any of your readers could give me its name. I may say that there was a keen frost at the time, and an adjoining meadow was nearly covered with ice." Strange to say, several of the previous reported occurrences of *Picus martius* have come from Herefordshire; and in the 'Birds of Breconshire,' by Mr. E. Cambridge Phillips, its appearance in that neighbouring county is recorded (Zool 1885, p. 305).—G. TOWNSEND (Polefield, Prestwich, near Manchester).

Yellow-billed Cuckoo in Somerset.—On Oct. 6th, 1901, a bird of this species (*Coccyzus americanus*) was shot at Pylle, in Somerset, and forwarded to me for identification. It was in perfect new plumage, bearing no traces of confinement, and proved on dissection to be a female. Heavy westerly gales had been blowing on that and the previous day, which doubtless brought this American visitor in from the Bristol Channel. I exhibited this specimen at the November meeting of the British Ornithologists' Club, and note since then that Mr. G. B. Corbin records another specimen from Hampshire, also in October. A specimen was found in 1900 on the shores of the Menai Straits, also in October, and of the six or seven previously recorded British specimens, all of them of which the dates of captures have been preserved have occurred in the month of October, beginning with October, 1825. The species is migratory in the United States, like our own Cuckoo is in Europe, and from the fact of all the British-taken specimens occurring in the month of October, it is fairly evident they are not escapes from confinement. They are doubtless wanderers which have lost their way, or been blown out to sea during their autumnal migration, and, by the help of westerly gales and possibly assisted passages on the rigging of vessels, have been enabled to reach these shores. They should, I think, therefore fairly claim a place on the British list as "accidental visitors."—ROBERT H. READ (Bedford Park, London, W.).

Kingfisher near Aberdeen.—The most interesting ornithological event here is the recent acquisition of a Kingfisher (*Alcedo ispida*) on the Don, a few miles inland from Aberdeen. A second specimen was picked up in a starving condition about twenty-five miles inland, at the watercourse of Moutgarrie grain-mills, Alford, Aberdeenshire.—W. WILSON (Alford, Aberdeen, N.B.).

Shoveler in Herts.—A female specimen of the Shoveler (*Spatula clypeata*) was shot on a pond near here, in company with some ordinary ducks, on Dec. 2nd last; it was in splendid condition. As far as I can gather, this is the first time the species has been recorded from Herts. The bird was given to me, and sent to Messrs. Watkins and Doncaster for preservation.—HENRY JENNINGS (42, Marlowes, Hemel Hempstead, Herts).

King-Eider in Fifeshire.—A male King-Eider (*Somateria spectabilis*) was shot on a moor in Fifeshire on June 15th, 1899. It was in company with Common Eiders, which breed on the moor in considerable numbers. I saw the bird the day after it was shot.—BERNARD B. RIVIERE (82, Finchley Road, N.W.).

Red Grouse in Surrey.—Can any reader tell me whether Red Grouse have ever been turned down in Surrey besides those mentioned in Bucknill's 'Birds of Surrey,' viz. by the Duke of Gloucester in 1829, and by Colonel Chaloner at the beginning of last century? The reason I ask, is that an old inhabitant of Chobham, in Surrey, told me, with many particulars, that he had once seen some on Chobham Common some thirty years ago. If none have been turned down since 1829, he must surely have made a mistake, as otherwise they would have been noticed by other people between 1829 and 1870. He knows the difference between Red Grouse and Black Grouse, which he has also seen on Chobham Common, but which, I think, are now extinct.—S. H. LE MARCHANT (44, Pont Street, S.W.).

Nesting of the Moor-hen (*Gallinula chloropus*).—In 'The Zoologist' (1901, p. 17) there appeared a very interesting article on the nesting of the Moor-hen by Mr. Oliver G. Pike, in which the writer points out a curious fact concerning the extra nests built by these birds. In a pond near here a pair of Moor-hens build every year, and on one occasion I noticed two other nests built in the reeds at the side of the pond, one at about fifty yards and the other about one hundred yards from where they had constructed their proper nest, which is usually on a small island in an overhanging rhododendron-bush, about six inches from the water. This nest was neatly built of small twigs, and lined with grass and leaves in the usual way; the other two nests

were quite different, being made in the reeds, and were constructed by twining them in and out until a small platform was made about eight or ten inches in width, and about five or six inches high. These nests were never lined, and must have been, as Mr. Pike says, used as a roosting-place for the young birds. I think the strangest circumstance is that they were built so differently from the real nest, and Mr. Pike does not say whether he noticed this point or not. It is a well-known fact that Wrens build a number of false nests, very much after the fashion of the Moor-hen; but I have never heard of these being used for any purpose. The Rev. J. C. Atkinson, writing in 'The Zoologist' (1844), p. 767, on the second nests of these birds, says, occasionally constructed "to accommodate a moiety of its young when they have attained a size too large to permit the original one to contain them all. And when the colony is sent to the second nest, one of the old birds accompanies it. An instance of this habit occurred in the vicinity of my father's residence when I was last at home. The female Moorhen was the architect, and the subsidiary nest she busied herself in constructing was built on a bough overhanging the water." Mr. Atkinson, in his little book on Birds, Nests, and Eggs, also records this fact. W. H. WORKMAN (Lismore, Windsor, Belfast).

Unusual Nest of the Ringed Plover (*Ægialitis hiaticula*).—Scores



of Ringed Plovers nest on the gravel sea-banks which nearly surround a four hundred-acre farm in the neighbourhood of Portsmouth, some-

times in the fields as well; and, as is their wont, when laid in the latter situation, the eggs are surrounded with small pebbles or pieces of shells; but the following nesting arrangement I venture to think very rare, and should much like to know if any of your correspondents have met with a similar nest. On May 26th, 1900, I found, in a ploughed field, a rude nest, constructed of bents, resembling that of the Lapwing, only smaller; this contained three eggs of the Ringed Plover. The ground on which it lay was about to be harrowed, so I removed the eggs. On June 14th I found a similar nest (evidently the work of the same pair of birds) a short distance from where the first had been constructed, but this one was placed in a patch of coarse grass, and contained four Ringed Plover's eggs. I am aware that Col. Feilden describes a nest of the Ringed Plover lined with the leaves and stems of *Atriplex littoralis*, but this was found abroad, and referred to the small variety of Ringed Plover.—J. E. H. KELSO (67, Elm Grove, Southsea, Hants).

On the feigning of Injury by the Lapwing (*Vanellus vulgaris*) to attract attention from its Young.—Whilst looking through some back volumes of 'The Zoologist,' I noticed (1897, p. 473) the statement, "that sitting Lapwings (that is, females) decoy intruders from their nests by their devices," described as an ornithological fallacy. I conclude that by the word "devices" the writer refers to the feigning of injury usually attributed to that bird. Mr. E. Selous appears to be equally sceptical upon this subject, for in his book 'Bird-Watching' (p. 66) he writes:—"Perhaps it may be wondered why I have not included the Peewit in the list of birds which employ, or appear to employ, a ruse in favour of their young ones, since this bird is always given as the stock instance of it. The reason is that whilst the birds I mention [Nightjar, Mallard, &c.—B. B. R.] have always, in my experience, gone off, so to speak, like clockwork, when the occasion for it arrived, I have never known the Peewit to do so, though I have probably disturbed as many scores—perhaps hundreds—of them, under the requisite conditions, as I have units of the others. I have also inquired of keepers and warreners, and found their experience to tally with mine. They have spoken of the cock-bird 'leading you astray' aerially, whilst the hen sits on the nest, and of both of them flying with screams close about your head when the young are out, which statements I have often verified. But they have never professed to have seen a Peewit flapping over the ground as with a broken wing in the way it is so constantly said to do. I cannot therefore but think that by some chance or other an action, common to many birds, has been particu-

larly, and yet wrongly, ascribed to the Peewit." As we have here two experienced observers expressing their disbelief in the fact that the Lapwing ever employs the ruse of "shamming wounded" on behalf of its offspring, I thought the following incident worth reporting, as evidence in the opposite direction :—On May 30th of this year (1901) I was walking along the bank of an old disused canal, bounded on either side by a considerable stretch of flat marshy ground, upon which a number of Lapwings breed. As I approached a certain spot I noticed a pair of these birds becoming tremendously excited, flying backwards and forwards past me in a manner so characteristic of them when their young are hatched, and crying incessantly. When I thought I had reached the place about which they seemed most anxious, and near where the young were probably lying hidden in the grass, I stopped, and immediately both birds alighted on the ground close to me, with wings spread and hanging down brushing the ground, and each began running along, constantly toppling over on to one shoulder, with wings flapping feebly upon the ground, exactly as if injured. When I approached them they immediately flew up, and began flying backwards and forwards again close to my head; but when I stopped they again settled, and went through the same performance. There was no doubt about the simulation of injury, and I think this conclusively proves that the Lapwing does—at all events, upon occasions—employ this well-known deception to protect its young, though in the case of these birds the instinct did not seem to be a highly perfected one, as when approached they gave up the deception, and did not attempt to decoy me further. I have never before seen a Lapwing act in this manner, and had always myself been sceptical upon the point. Mr. E. Selous, in 'Bird Watching,' discussing the possible origin of this interesting piece of acting in birds, suggests that the performance might have been originally due to a sort of hysteria and loss of mental balance caused by the shock of being suddenly disturbed from the nest, after sitting still for a long time, and that this has been acted upon by Natural Selection, "aided by the intelligence of the bird in perceiving the advantage of such a performance," until it has become an "instinct" or habit. But I have often thought it might have arisen from birds being seized with actual cramp from long sitting, this having been acted upon by Natural Selection in the same manner; and it seems to me quite possible that even some of the cases one meets with to-day of birds fluttering along the ground as if wounded, when put off their nests, may be attributable to temporary cramp from long sitting in the same position. — BERNARD B. RIVIERE (82, Finchley Road, N.W.).

Notes from Wilsden, Yorkshire. — From observations extending over many years, I think that there cannot be any reasonable doubt, so far as this district is concerned, that a separation of sexes of many species of birds occurs on the approach of winter. A very large proportion of Sparrows which come to be fed in our garden are male birds—at least, not more than one female to three or four males—and the proportion of male Blackbirds is even greater; and this remark applies not only to those which frequent our garden, but to the whole district. It is hardly needless to refer to the Chaffinch, as this habit is so well known. We very seldom see a female here from early December to early February. Of the many other species which frequent the garden, the differences in the sexes being less striking than those already mentioned, make it a much more difficult matter to determine with any degree of certainty the relative proportion of the sexes in winter. It is, however, hardly likely that migration of females will be confined to the above-named species. Even amongst the class of birds which are so called “residents,” it is, and has long been, a belief with me that there is much more migratory movement than has been generally acknowledged by ornithologists. I was called to look at a bird the other day which had been shot in the immediate neighbourhood, which proved to be a Hawfinch, a species whose status in our local avifauna has changed of late years, perhaps more than any other British bird. Speaking of this species, Mr. Jenyns, in his *Manual* published in 1885, says:—“Only an occasional visitant in this country during the winter months. Principally observed in the southern countries. In a few instances has been known to remain and breed. Feeds on haws and other stone fruits.” Here, I think, it is commoner in summer than winter. We found last summer two nests in Wharfedale, almost in the identical places we found two in the year 1900. On dissection the above bird was found to have been feeding on wheat, which is somewhat curious, when what one would have thought its more natural food was abundant in the locality where it was shot. Another friend recently called here—a caretaker of one of the Bradford Corporation reservoirs—and gave a description of a bird he and another man had seen flying about the vicinity of his residence about the month of last September or October, which could be no other British bird than the Golden Oriole. We are quite aware how unreliable such descriptions usually are when given by casual observers, but this species is so very striking that, even allowing for a liberal dash of inaccuracy, it would be difficult to confound with any other bird. A race, if not a species, of Wren, differing from the Wren which nests here, is met with occasionally in early autumn on our high moors, and are evidently

immigrants. They are much larger, and may be the St. Kilda Wren; anyhow, they keep more to the high ground, and are not nearly so arboreal in their habits as the common species. It is, however, more probable that they may have been bred on some other of the isles of North Britain.—E. P. BUTTERFIELD (Wilsden, near Bradford).

Rare Birds in Surrey.—The following birds have lately passed through the hands of Mr. Bradden, the Guildford taxidermist:—A Golden-eye (*Clangula glaucion*), female, shot at Shamley Green, near Guildford, Nov. 17th, 1901; a Spoonbill (*Platalea leucorodia*), female, procured at Claudon Park, Nov. 26th, 1901; and a Storm-Petrel (*Procellaria pelagica*), male, caught alive at St. Catherine's, Guildford, by police-constable Turner, flying at lighted lamp, Dec. 28th.—GORDON DALGLIESH (Inglefield, Milford, near Godalming, Surrey).

Birds of the Isle of Man.—Being engaged in the collection of material for a work on Manx birds, I will gratefully receive and acknowledge information bearing on the subject; or references to books, periodicals, &c., in which such occur, and which may not have come under my notice.—P. RALFE (Castletown, Isle of Man).

NOTICES OF NEW BOOKS.

Zoology: an Elementary Text-Book. By A. E. SHIPLEY, M.A., &c., and E. W. MACBRIDE, M.A., &c. Cambridge: at the University Press.

"WE have tried in the following book to write an elementary treatise on Zoology which could readily be understood by a student who had no previous knowledge of the subject." This is the opening sentence of the preface. The word Zoology "denotes the science which concerns itself with animals, endeavouring to find out what they are, and how they came into being," is the definition given in the introduction. These two statements may be taken as admirable texts to a volume which should be in the hands of those many naturalists who are not in the strict sense zoologists.

After discussing the "fundamental" difference between animals and plants, which after all is perhaps less fundamental than relative, we come to a most pregnant sentence, which will well bear repetition and remembrance: "Since we can never learn much about the consciousness of beings with whom we cannot speak, zoologists content themselves with looking at animals entirely from the outside, without enquiring as to whether or no they are conscious." We believe that a communication with animal life will be the great zoological discovery of the future, though at present scarcely a single experiment is being made to aid a work which, like meteorology, can only make a start on the results of experiments and observations continuously made, and frequently verified. The very statement of our disability through this cause to really understand other animal life than our own is at once a mark of progress.

In reading these pages one cannot but appreciate the loss to bionomics that accrues by the neglect of observations on many lower forms of life. If we except the Phylum *Arthropoda* and the higher vertebrates, we shall find this volume describing

Zool. 4th ser. vol. VI., January, 1902.

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animals which seem totally neglected by field naturalists. How many have observed a Starfish in the act of devouring a Mussel, of which an excellent illustration is given? (p. 241). A little practical zoology will also guide our observations and conclusions. All of us who have hunted Crocodiles will remember the sometime unpleasant proximity of the tip of snout, and that only to be seen, of one of these submerged saurians close to the small and deeply-laden canoe; but do all remember that this ruse is only possible by the fact of the choanæ or posterior nares being "situated very far back directly over the glottis, whilst the external nostril is at the tip of the snout"?

A feature in the classification is that of a large Sub-phylum of the Phylum *Vertebrata*, designated *Craniata*, distinguished by possessing a skull and brain. This is again divided into two divisions, that styled *Gnathostomata* including Pisces, Amphibia, Reptilia, Aves, and Mammalia. However, classifications are only propositions; but in studying these we frequently discern affinities of which we had no previous cognizance, and differences of whose existence we were ignorant. Our space debars further reference to this most interesting and important volume.

The Protozoa. By GARY N. CALKINS, Ph.D. New York :
The Macmillan Company.

IN a hidden world—at least beyond the range of our unaided vision—live the Protozoa, unicellular organisms "not far removed from the colorless bacteria on the one hand, and the primitive green plants on the other." In the earlier works of Linnæus the existence of these animals was treated with complete scepticism, though in the later editions of the '*Systema Naturæ*' they were admitted under the significant generic name *Chaos*. Why, to-day, are these creatures so neglected by zoologists? Some are even known to menace the life of man, but it would be as difficult to find an ordinary child who was ignorant of the existence of the Tiger, as to discover one who could define what was meant by a Protozoön. The Protozoa are also of indirect injury to humanity. Among the Sporozoa the Sarcosporidiida produce morbid symptoms in domestic animals often leading to death, while

the Myxosporidiida are a deadly scourge to fish and silkworms. Then again their relation to the problem as to whether plants and animals in primitive forms are capable of demarcation is a most important one, for, as Dr. Calkins points out, Buffon wrote as early as 1749: "We are led to conclude that there is no absolute and essential distinction between the animal and vegetable kingdoms."*

We might further digress on the many interests attached to the Protozoa. What are the bionomics of these living unicellular structures; and has not immortality been ascribed to their method of reproduction by simple division? But we will refer all enquirers to the book itself. It is a volume which describes what to most people is an unknown life in an unseen world, and is another instance of the good work now being done in America.

The Birds of South Africa. By ARTHUR C. STARK, M.B.; completed by W. L. SCLATER, M.A., F.Z.S. Vol. II. R. H. Porter.

THE second volume of this excellent monograph has appeared, and possesses a somewhat melancholy interest. Dr. Stark, the original author, and whose portrait is given as a frontispiece, was slain by a Boer shell during the siege of Ladysmith. The manuscript that was left behind by the deceased ornithologist has been placed in the hands of the Director of the South African Museum, who, with necessary revision and additions, has produced this volume, and will, we are glad to learn, bring the work to a conclusion in two final volumes.

The present publication continues the description of the Passeres, commencing with the *Laniidæ*, and concluding with the *Pittidæ*. It thus includes the Warblers, a group which in the Transvaal the writer of this notice found was very imperfectly known, and probably insufficiently collected. These birds only attract the attention of the earnest ornithologist, and as a rule

* This view must have had considerable vogue in France, and is probably the derivation of the remark lately attributed by Lord Rosebery to Napoleon—"The plant is the first link in a chain of which man is the last" ('Napoleon, the Last Phase,' p. 170).

are passed over by the ordinary collector; so that it is still probable for the present enumeration to be extended. If instructions were given for these small birds to be sent home in spirit much more would be known about them; for the tired waggon-traveller to keep awake and skin these small creatures is a thing to be hoped for rather than expected. In all orders, the smaller the species the more difficult to acquire—at least, in South Africa, where many a good sportsman, both Boer and Briton, will cheerfully take the trouble to procure you an animal of size, but will resent being asked to collect and skin Warblers.

We have heard of pianos accompanying our military columns to help while away the monotonous expeditions over a lonely veld. We would propose that this series of faunistic books should be supplied to every mess-room, whether peripatetic or otherwise. They are volumes that will be appreciated by every naturalist in our South African colonies, and especially by our military men who are now traversing the whole of a region yet somewhat imperfectly known to ornithologists.

Photography for Naturalists. By DOUGLAS ENGLISH.
Iliffe & Sons, Limited.

NATURE is ever seeking to be revealed. Sometimes she appears in the verse of Wordsworth, on another occasion in the magic prose of Ruskin, while painters have even often attempted to improve her on the inspiration of successive schools of art. Among naturalists a higher criticism is arising, a desire to see her portrayed as she is, or as she is to our perceptions. Photography is now invoked by the zoologist rather than the handwork of the artist, and the results, great as they are now, exhibit a still greater potentiality in the future. The present volume is designed as a means to that end, though it largely advocates a photography of natural objects "by control"—in other words, to photograph animals in captivity after making the artificial surroundings to look as natural as possible. This we consider a retrograde step, and one photo of an animal at large, and unaware of the attentions of the camera enthusiast, must surely

be in every respect more close to nature than the scared or enraged appearance of caged animals; our sympathy is altogether with the Rat and its efforts to frustrate the intentions of the photographer, as described (pp. 38-41).

The illustrations in this book are of the most instructive character, those of fish and "twenty years a cat" being exceedingly successful. But for charm and beauty these pale before the lovely photographic landscapes taken by Mr. Charles Job, of which six appear in this volume.

A Ready Aid to distinguish British Wild Birds. By DAVID T.
PRICE. Gurney & Jackson.

WE presume that this small publication is not addressed to ornithologists, by whom it might receive scant welcome, and we write this opinion in a mollient and not aggressive sense. It is apparently intended for those living in the country, who have little knowledge—if any—of the bird-life around them, who never acquired the wild lore of the schoolboy who happily nested and trespassed in many well-remembered nooks and preserves. Its usefulness may be found in its limitation; for those who know nothing, or next to nothing, about birds, after reading these pages, will probably go farther and seek to know more. The information given is concise, so far as the necessary superficial description is concerned.

EDITORIAL GLEANINGS.

IN the December number of 'The American Naturalist,' Dr. H. W. Rand has given an extended abstract of Friedenthal's experimental proof of blood-relationship.* The blood of the Cat and the Ocelot is physiologically equivalent. The carotid arteries of these two animals were connected so that an exchange of blood took place from one to the other. No hemoglobin appeared in the bladder of either animal. But if a Cat and a Rabbit be connected in the same way, both animals die in a few minutes from the poisonous effects of the foreign blood upon the central nervous system. The effect of human serum was tried upon the blood of six species of Apes—(*Platyrrhines*), *Pithesciurus sciureus* and *Ateles ater*; (*Catarrhines*), *Cynocephalus babuin*, *Macacus sinicus*, *M. cynomolgus*, and *Rhesus nemestrinus*—at the Berlin Zoological Garden. In all cases the human serum dissolved the Ape corpuscles. Among the true Anthropoid Apes is found blood which is physiologically equivalent to that of man, as was proved by experiments made with an Orang-outang, a Gibbon, and a ten-year-old Chimpanzee, just as the blood of such widely separated races as the negro and white is physiologically equivalent. The writer concludes that such experiments justify the placing of man and the Anthropoid Apes together in the same family, "or at least in the same suborder, rather than isolating man in a suborder of primates, coördinate with the suborders of the *Platyrrhines* and *Catarrhines*."

At a meeting of the Zoological Society on Dec. 17th, 1901, a communication was read from Mr. G. Metcalfe, M.A., of New South Wales, concerning the reproduction of the Duckbill (*Ornithorhynchus anatinus*). The author stated that he was of opinion, after many years' observation of the animal, that the Duckbill was viviparous, and that the young were not, as was generally supposed, hatched from the eggs after they had been deposited.

WE have received from Cairo, 'Notes for Travellers and Sportsmen in the Sudan.' "Published by Authority." This will prove a most

* "Ueber einen experimentellen Nachweis von Blutverwandschaft," 'Archiv für Anatomie und Physiologie,' physiologische Abtheilung, Hefte 5 und 6, 1900.

useful guide to naturalists or others proceeding to Khartoum. Routes and expenses are detailed. There are several restrictions. Anyone wishing to take skins, horns, &c., of any ruminant through Egypt must obtain a special permit, and the specimens must be packed in hermetically and Government-sealed tin-lined boxes or tins. Live ruminants—in consequence of the possibility of cattle plague being introduced—can only be exported *via* Suakim.

MR. GEORGE WATSON COLE, of New York, has sent us a privately printed Bibliography of the scientific results obtained by the 'Challenger' Expedition at and near Bermuda. To students of insular faunas this digest should prove a very great convenience.

LORD CURZON, whilst on his recent tour in Burma, gave an interesting reply to an address from the Burma Game Preservation Society. Speaking of game preservation in India and Burma, he said that, though he yielded to no one in his love for sport, he had to look at the question in the public interest, and he had no doubt that wild life in India was on the decrease. Thus Lions were shot in Central India up to the Mutiny; they are now confined to an ever-decreasing patch of forest in Kathiawar. Except in the native States, the Terai, and the forest preserves, Tigers are undoubtedly diminishing. The Rhinoceros is all but exterminated, except in Assam. Bison are not so numerous nor so easy to obtain as they once were. Elephants have already had to be protected in some parts; above all, Deer are rapidly dwindling, and many beautiful and harmless varieties of birds are pursued for their plumage. The causes of all this decrease in the wild life in India are various; some are natural in consequence of the increase of cultivation and population; others are artificial, such as the great increase in the number of persons carrying firearms of range and precision, the depredations of native hunters, and the shooting of immature animals and females. Some argued that wild animals were bound to disappear in India as surely as Wolves had in England, while others said that India was so vast, and had such large forest preserves, that wild animals may safely be left to look after themselves; but he did not agree with either of these propositions. Wild animals, he said, must not be fostered at the expense of the people, and the cultivator must have reasonable means of protection. The Government, hitherto, have not been very bold in their legislation; Elephants have been protected, a close season for certain kinds of

game has been instituted, certain wild birds have been protected, and certain classes of animals have been protected in certain forest tracts. Whether these various measures may not be carried a little further was a matter which he promised to investigate. It was impossible to lay down rigid rules, for what was useful in one place might be injurious in another. A restriction on carrying arms by the imposition of a licence fee, the enforcement of a close season in regard to particular animals, restrictions on the facilities given to strangers to shoot game, and on the export of trophies and skins, were, he thought, matters worthy of consideration, and the Government would probably proceed on these lines.—*Shooting Times*.

WE have received, with the greatest regret, the news of the death of Dr. T. Thorell, the distinguished arachnologist. Dr. Thorell was born in 1830, and died on December 23rd, 1901, at Helsingborg, Sweden.

It has previously been remarked in these pages that 1901 might be called the "Okapia year." We have now received 'The Song of the Okapi,' written by the veteran Secretary of the Zoological Society, Dr. P. L. Selater, and set to suitable music.

